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EXAMINER	
BOAKYE, ALEXANDER O	
ART UNIT	PAPER NUMBER
2666	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/261,017	KOKKINEN, HEIKKI	
	Examiner	Art Unit	
	Alexander Boakye	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 1999* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6 and 8-11* is/are rejected.

7)☒ Claim(s) *7* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 103

1. Claims 1, 3-6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohanian et al (US Patent # 6,122,287) in view of Kudoh et al. (US Patent # 6, 154,458).

Regarding claim 1 , Ohanian discloses : establishing a signal connection with a terminal (Figs. 2 @ 30 ; column 6, lines 61-64 ; a signaling connection has to be established before the network terminating device 40 communicates with the terminal equipment 30) in a central unit (Fig. 2 @ 40) of a communication system, the terminal (Fig. 2 @ 30) and central unit (FIG.2 @ 40) comprising a network interface (Fig. 2 @ 50 ; the terminal's network work interface is resident in the terminal equipment).

Furthermore, Ohanian teaches steps in which by means of communication between the central unit's network interface (Fig. 2 @ 50) and the terminal's network interface (the network interface of the terminal is resident in the terminal equipment) information is created about the signaling protocol (Ohanian teaches data link protocol setup but his invention could also be used for signaling protocol setup since Ohanian teaches end-to-end signaling as shown in Fig. 1) supported by the terminal.

Ohanian fails to disclose the claimed signaling unit. Ohanian also fails to disclose that a message is sent from the central unit's network interface to the terminal , indicating the signaling protocols supported by the central unit, in response to an

answer message sent by the terminal indicating the terminal's selection for signaling protocol, a connection is established between the central unit's network interface and central unit's signaling protocol chosen by the terminal.

Furthermore, Ohanian also does not teach that a point-to-point signaling connection is established between the central unit and the terminal using the signaling protocol selected by the terminal. However, Kudoh teaches signaling Unit (signaling protocol unit at ATM-SW10 and signaling protocol unit at ATM Terminal 12, Fig. 13 constitute the claimed signaling unit). Kudoh teaches a message is sent from the central unit's network interface to the terminal (column 14, lines 49-53), indicating the signaling protocols supported by the central unit, in response to an answer Message (column 15, lines 1-7) sent by the terminal indicating the terminal's selection for signaling protocol (column 15, lines 9-11), a connection is established between the central unit's network interface and the central unit's signaling unit that supports the signaling protocol chosen by the terminal (column 14, 49-53).

Kudoh discloses that signaling is started using a signaling unit (signaling protocol unit at ATM-SW10 ; Fig. 13) in the central unit that supports the same signaling protocol as the terminal. Kudoh teaches that a point-to-point signaling connection is establishing between the central unit (ATM-SW, Fig. 13 is the central unit) and the terminal using the signaling protocol selected by the terminal (column 14, lines 49-57).

Therefore, it would be obvious to one skilled in the art to incorporate Kudoh's signaling protocol unit into Ohanian's network protocol with the motivation being to

provide capability for the system to select terminal protocol in order to set up signaling connection.

Regarding claim 3 Ohanian teaches establishing a signaling connection with a terminal (Fig. 2 @ 30 ; column 6, lines 61-64) in a central unit . Ohanian fails to disclose that the message contains a code for signaling protocol . The claimed message contains a code for signaling protocol reads on Kudoh's ColdStart Trap containing the signaling information purporting that the signaling protocol is pursuant to the ATM forum (column 14, lines 14-16). It would have been obvious to one skilled in the art to incorporate Kudoh's ColdStar Trap code into Ohanian's network with the motivation being to provide supporting a particular signaling protocol.

Regarding claim 4, Ohanian teaches establishing a signal connection with a terminal (Fig. 2 @ 30: column 6,lines 61-64). Ohanian does not teach a method characterized in that in response to a situation in which the central unit's capability of supporting various signaling protocols changes, a change message is sent to the terminals indicating the signaling protocols supported by the central unit after the change.

Kudoh teaches a method characterized in that in response to a situation in which the central unit's capability of supporting various signaling protocols changes, a change message is sent to the terminals indicating the signaling protocols supported by the central unit after the change (column 4, lines 40-59; see Fig. 21; column 24, lines 14-21). It would have been obvious to one skilled in the art to incorporate Kudoh's

protocol changing unit into Ohanian's network . The motivation would be to provide capability for the system to change the signaling protocol used by the call-in terminal.

Regarding claim 5, Ohananian discloses communication according to the MAC protocol layer (MAC protocol layer is in Data link layer, Fig. 1) between the central unit's network interface (Fig. 2 @ 50) and the terminal's network interface (Fig. 2 @ 68). Ohanian does not teach signaling unit. Kondoh teaches signaling unit (signaling protocol unit at ATM-SW10 and signaling protocol unit at ATM terminal 12, Fig. 13) information is created about the signaling protocol supported by the terminal, and signaling is started using a signaling unit in the central unit that supports the same CC protocol layer signaling protocol as the terminal.

It would be obvious to one skilled in the art to incorporate Kudoh's signaling protocol unit into Ohanian's network with the motivation being to provide signaling between terminal nodes.

Regarding claim 6, Ohanian teaches establishing a signaling connection with a Central unit (Fig. 2 @ 40) in a terminal (Fig.2 @ 30) of a communication system, the terminal (Fig. 2 @ 30) and central unit comprising a network interface (Fig. @ 50; the terminal's network interface is resident in the terminal.

Ohanian does not teach in response to a message sent by the central unit's network interface indicating the signaling protocols supported by the central unit, and answer message is sent from the terminal's network interface indicating the signaling protocol selected by the terminal when the terminal supports a signaling protocol.

Ohanian also does not disclose a connection is established between the terminal's network interface and the terminal's signaling unit.

Kudoh teaches in response to a message sent by the central unit's network interface indicating the signaling protocols supported by the central unit, and answer message (column 15,lines 1-7) is sent from the terminal's network interface indicating the signal protocol(column 15, lines 9-11).

Kudoh also discloses a connection is established between the terminal's network interface and the terminal's signaling unit (connection setup between ATM Terminal 11 and ATM terminal 12 where signaling unit is resident).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kudoh's signaling protocol unit with Ohanian's network with the motivation being to provide capability for the system to communication between terminals using signaling protocols.

Regarding claims 8, and 9, Ohanian discloses network interface (Fig. 2 @ 50), characterized in that it is equipped so as to use with a terminal (Fig. 2 @ 30) of the communication system. Ohanian does not teach a signaling unit. Ohanian also fails to disclose means for indicating to the terminal the signaling protocols supported by the central unit and means for setting up a signaling connection via the central unit's network interface, using a selected signaling protocol between central and the terminal.

Kudoh's teaches a signaling unit(signaling unit at ATM-AW10,Fig. 13). Kudoh discloses means for indicating to the terminal the signaling protocols supported by the central unit and means for setting up a signaling connection via the central unit's

network interface, using a selected signaling protocol between central and the terminal (column 15, line 9-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kudoh's signaling protocol unit with Ohanian's network with the motivation being to provide capability for the system to communicate between terminals using signaling protocols.

Regarding claim 10, Ohanian discloses : a communications system comprising a central unit (Fig. 2 @ 40) and terminals (Fig. 2 @ 30), characterized in that it is equipped so as to set up and maintain a signaling connection (column 6, lines 61-64) between the central unit (Fig. 2 @ 40) and at least one terminal (Fig. 2 @ 30) of a communications system.

Ohanian does not teach means for indicating to the terminal the signaling protocols supported by the central unit and means for setting up via the central unit's network interface a signaling connection using a selected signaling protocol and the terminal unit . Ohanian also fails to disclose means for indicating the capability of the terminal of supporting a particular protocol in response to a message sent by the central unit and setting up via a network interface in the terminal a signaling connection.

Kudoh teaches means for indicating to the terminal the signaling protocols supported by the central unit and means for setting up via the central unit's network interface a signaling connection using a selected signaling protocol and the terminal (column 3, lines 42-45).

Kudoh discloses means for indicating the capability of the terminal of supporting a particular protocol in response to a message sent by the central unit and setting up via a network interface in the terminal a signaling connection(column 4, lines 28-32 ; column 5,lines 9-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kudoh's signaling protocol unit with Ohanian's network with the motivation being to provide capability for the system to communicate with the terminal and the central unit.

Regarding claim 11, Ohanian teaches optical fiber (column 2, lines 31-34).

Allowable Subject

2. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

3. Applicant's arguments filed 2/27/03 have been fully considered but they are not persuasive.

A) At page 4, in claims 1-6 and 8-11 applicant argued that Ohanian reference admittedly disclose the general idea of sorting out a situation where two communicating devices must first agree upon a common data link layer protocol for communication, before meaningful communication may begin. However, the applicant argued that , the way in which this idea is implemented in practice is fundamentally different from the applicant's present invention. Applicant argued that Ohanian assumes that the remote

device may be completely ignorant of the protocol choosing step, and just transmits using its own default protocol. It is then the responsibility of the local or responding device to find out which protocol the initiation corresponds to.

B) In response, the examiner maintains that Ohanian's device is not completely ignorant of the protocol choosing step because in Ohanian's reference when a protocol is detected, the local system activates the appropriate protocol subsystem to permit the local system to establish a data link connection and communicate with the remote system across the network (column 4, lines 64-67).

C) At page 5, in claims 1-6 and 8-11, applicant argued that it is important to note that in the Ohanian arrangement, the remote device will not even become aware of there being a protocol-choosing step in the procedure of setting up a connection. On the other hand, in the claimed invention, both devices take an active part in the protocol negotiation.

D) In response, the examiner maintains that it is evidenced by Ohanian that in order for two parties to transfer data, it is necessary for the parties to establish both a circuit or network connection between them and to establish a data link connection between them. The data link connection includes the procedures and protocols necessary for the parties to transfer data via the circuit or network connections, the data link connection may be initiated by either party, typically by initiating a link setup procedure whereby the parties agree to begin the exchange of data according to a common protocol(column 3, lines 21-33). Therefore, both devices take an active part in the protocol negotiation according to Ohanian.

E) At page 5, in claims 1-6 and 8-11, applicant argued that the present invention does not allow the very free ad hoc matching of protocols allowed by Ohanian, because when the remote devices receive the MAC transmission control message they must, as an absolute minimum requirement, be able to locate the code value within it correctly ; in other words the responding (remote) units must know the "protocol" that was used to compose the MAC transmission control message.

F) In response, the examiner maintains that the areas that the applicant is arguing is not related to the claimed subject matter.

G) At page 6, in claims 1-6, and 8-11, applicant argued that the present claimed invention differs from Ohanian in that, according to the invention, the central unit is assumed to have signaling units separated from network interfaces, so that any pair where one has been picked from each group can basically be used for communication. Also. In the remote unit there is a separation between a network interface and a signaling unit.

H) In response, the examiner maintains that Ohanian teaches the claimed central unit (Fig. 2 @ 40) comprising a network interface (Fig. 2 @ 50) but fails to disclose the claimed signaling units. However, Kudoh teaches signaling units (signaling protocol unit at ATM-SW 10 and signaling protocol unit at ATM terminal 12, Fig.13 constitute the claimed signaling unit). Therefore, it would have been obvious to one of ordinary skill in the art to combine Kudoh's network system including signaling protocol unit with Ohanian's switched network protocols since Kudo's data link protocol set up can also

be used for signaling protocol set up with the motivation being to provide capability for the system to set up connection between two devices using signaling protocol.

I) At page 6, in claims 1-6 and 8-11, applicant argued that the independent claims of the present application expressly required that the network interfaces of the communicating devices are responsible for the signaling protocol sort-out, and the signaling units only come into play after the network interfaces have come to conclusion about the protocol to be used. Applicant argued that the examiner cited the reference publication of Kudoh (us # 6,154,458), which relates to the ATM world and admittedly discloses the fact that a communicating device (an ATM terminal in Kudoh) may comprise an "MIB" Editing unit" the task of which is to edit (create) messages that are to be transmitted to the ATM switch (column 7, lines 32-33). Applicant said Kudoh only discloses the use of a single protocol processing unit and not multiple processing units that are selected in parallel.

J) In response, the examiner maintains that the applicant said in page one that, admittedly Ohanian discloses the ideas of sorting out a situation where two communicating devices must first agree upon a common data link layer protocol for communicating before meaningful communication may begin. Kudoh discloses that signaling is started using a signaling unit (signaling protocol unit at ATM-SW10; Fig. 13) in the central unit that supports the same signaling protocol as the terminal.

K) At page 7, applicant argued that Kudoh's configurable protocol processing unit is a feature of the terminal, whereas the present invention involves a terminal capable of

having one fixed signaling unit and one network interface, while a central unit has a multiple of both types of devices.

L) In response, the examiner maintains that Kudoh's invention relates to a terminal capable of having one fixed signaling unit (see Fig. 13).

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (703) 308-9554.

The examiner can normally be reached on M-F (from 8:am to 5:pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao Seema can be reached on (703) 308-5463. The fax number is (703)

872-9314. Any inquiry of a general nature or relating to the status of this application of proceeding should be directed to the group receptionist whose telephone number is (703) 305-4750.

Alexander Boakye
AB
Patent Examiner

5/16/03

Seema S. Rao
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